

REMARKS

This Amendment is responsive to the Office Action dated October 19, 2005.

Applicant has amended claims 1, 9, 30, 37, 43 and 44, and added new claim 45. Claims 1-15, 30, 37, 43, 44 and 45 are now pending.

In the Office Action, the Examiner rejected claims 1-7, 9-15, 30, 37, 43 and 44 under 35 U.S.C. 102(b) as being anticipated by Katoh (USPN 5,754,682) and rejected claim 8 under 35 U.S.C. 103(a) as being unpatentable over Katoh.

All pending claims (except new claim 45) now require adjusted device-independent coordinates to correct for a visual mismatch between a display device and a hard copy when the display device and the hard copy render the same device-independent coordinates in the same illuminant conditions. This clearly distinguishes Katah, and is generally counterintuitive to industry accepted standards of the Commission Internationale de l'Eclairage (CIE). New claim 45 specifically requires the adjusted device-independent coordinates to correct for accuracies in a CIE standard, which also clearly distinguishes Katah.

In Katoh, correction techniques are specifically used to account for different intensity levels of illumination, color temperature, and impacts of the surroundings. Thus, the teaching of Katoh implies that no adjustments to device-independent coordinates would be performed in the event that the illuminant conditions and device-independent coordinates are identical for the display and the hard copy. The current invention, in contrast to Katoh, specifically applies when images rendered by the display device having measured device-independent color coordinates and illuminant conditions that are the same those for images rendered on a hard copy, look visually different than the images rendered on the hard copy. For this reason, the claims clearly distinguishes Katoh.

According to the CIE, the phenomenon required by Applicant's claims should not even occur. In particular, according to CIE if the measured device-independent coordinates and illuminant conditions are the same for a display and a hard copy, the images should look identical. According to Applicant's invention, however, if and when this is not the case, adjustments to the coordinates supplied to the display device can compensate for this apparent breakdown in color science as defined by CIE. Katoh identifies nothing that would have led a person of ordinary skill in the art to appreciate these drawbacks to the CIE standards. Applicant's disclosure, unlike Katoh, identifies this breakdown in color science defined by the CIE standards.

In the interest of advancing the prosecution of this application to issuance, Applicant has amended all pending claims to make the distinctions between Applicant's invention and Katoh more explicit. In view of the amendments herein to all pending claims, Katoh has been clearly distinguished. Accordingly, all claims should be allowed.

Independent claim 1 recites a method comprising obtaining a white point correction for a display device, obtaining a chromatic correction for the display device, and generating in a device-independent color space adjusted device-independent color coordinates for the display device based on measured device-independent coordinates associated with a hard copy in the device-independent color space, the white point correction and the chromatic corrections. In addition, claim 1 now further requires that the adjusted device-independent color coordinates for the display device compensate for a visual mismatch between imagery presented by the display device using the measured device-independent color coordinates relative to the same imagery presented by the hard copy using the measured device-independent color coordinates in the same illuminant conditions.

The techniques described in Katoh do not compensate for a visual mismatch between imagery presented by the display device using the measured device-independent color coordinates relative to the same imagery presented by the hard copy using the measured device-independent color coordinates in the same illuminant conditions. As noted above, in Katoh, the correction techniques are specifically used to account for different intensity levels of illumination, color temperature, and impacts of the surroundings. According to the teaching of Katoh, no adjustments would be performed in the event that the illuminant conditions and measured device-independent coordinates are identical for the display and the hard copy. Thus, unlike Applicants' claims, Katoh does not generate adjusted coordinates that compensate for visual mismatch between a display device and a hard copy at the same non-adjusted device-independent coordinates in the same illuminant conditions.

Claim 9 has been amended in a manner similar to the amendment to claim 1. Claim 9 now recites a method comprising determining device-independent coordinates in a device-independent color space defining a color on a hard copy, and generating adjusted device-independent coordinates in the device-independent color space for a display device using the determined device-independent coordinates in the device-independent color space, a white point correction and a chromatic correction, wherein the adjusted device-independent color coordinates for the display device compensate for a visual mismatch between imagery presented by the display device using the determined device-independent coordinates of the

hard copy relative to the same imagery presented by the hard copy using the determined device-independent coordinates in the same illuminant conditions.

Claim 9 should now be in condition for allowance for at least the same reasons identified above with respect to claim 1. In particular, Katoh lacks any suggestion of the generation of adjusted device-independent color coordinates that compensate for a visual mismatch between imagery presented by the display device using the determined device-independent coordinates relative to the same imagery presented by the hard copy using the determined device-independent coordinates in the same illuminant conditions.

Claims 30, 37 and 43 have also been amended in a manner similar to the amendment to claims 1 and 9. Claim 30 now recites a system comprising a display device, a memory device, and a processor coupled to the memory device and the display. The processor obtains a white point correction for the display device from the memory device, obtains a chromatic correction for the display device from the memory device, and generates in a device-independent color space adjusted device-independent color coordinates for the display device based on measured device-independent coordinates associated with a hard copy in the device-independent color space, the white point correction and the chromatic corrections, wherein the adjusted device-independent color coordinates for the display device compensate for a visual mismatch between imagery presented by the display device using the measured device-independent color coordinates relative to the same imagery presented by the hard copy using the measured device-independent color coordinates in the same illuminant conditions.

Claim 37 recites a computer readable medium carrying program code that when executed receives a white point correction for a display device as input, receives a chromatic correction for the display device as input, and generates in a device-independent color space adjusted device-independent color coordinates for the display device based on measured device-independent coordinates associated with a hard copy in the device-independent color space, the white point correction and the chromatic corrections, wherein the adjusted device-independent color coordinates for the display device compensate for a visual mismatch between imagery presented by the display device using the measured device-independent color coordinates relative to the same imagery presented by the hard copy using the measured device-independent color coordinates in the same illuminant conditions.

Claim 43 recites a computer readable medium comprising a color profile data structure thereon, the color profile data structure corresponding to a display device and including adjusted device-independent illuminant condition values that do not correspond to

actual device-independent illuminant conditions associated with the display device, such that colors rendered on the display device using the color profile data structure are visually equivalent to colors rendered on a printing device, wherein the adjusted device-independent illuminant condition values correct for a visual mismatch between a hard copy and imagery presented by the display device using measured device-independent color coordinates of the hard copy in the same illuminant conditions.

With respect to claim 44, Applicant notes that this claim requires the claimed method to correct output of a display device when images rendered by the display device have measured device-independent color coordinates that are the same as measured device-independent coordinates for the images rendered on a hard copy in the same illuminant conditions yet the images rendered by the display device look visually different than the images rendered on the hard copy. Therefore, this claim should be allowable insofar as Katoh implies that no adjustments to device-independent coordinates would be performed in the event that the measured device-independent coordinates and illuminant conditions are identical for the display and the hard copy.

Nevertheless, Applicant has further amended claim 44 to make the distinctions from Katoh even more apparent. The method of claim 44 requires obtaining a white point correction for a display device, obtaining a chromatic correction for the display device, and generating in a device-independent color space adjusted device-independent color coordinates for the display device based on non-adjusted device-independent coordinates associated with the hard copy, the white point correction and the chromatic corrections. Furthermore, this claim has been amended to require that the adjusted device-independent color coordinates adjust for the fact that images rendered by the display device having measured device-independent color coordinates that are the same as measured device-independent coordinates for images rendered on the hard copy in the same illuminant conditions look visually different than images rendered on the hard copy, and wherein images rendered by the display device using the adjusted device-independent color coordinates are substantially visually equivalent to images rendered on the hard copy using the non-adjusted device-independent coordinates.

Nothing in Katoh discloses or suggests the requirements of claim 44. Moreover, as noted above, according to the CIE, the phenomenon required by claim 44 (and the other claims) should not even occur. Furthermore, Katoh identifies nothing that would have led a

person of ordinary skill in the art to appreciate these drawbacks to the CIE standards.

Applicant's disclosure, unlike Katoh, identifies this breakdown in CIE standards.

New claim 45 recites a method of correcting for accuracies in a Commission Internationale de l'Eclairage (CIE) standard. The method comprises obtaining a white point correction for a display device, obtaining a chromatic correction for the display device, and generating in a device-independent color space adjusted device-independent color coordinates for the display device based on device-independent coordinates associated with a hard copy in the device-independent color space, the white point correction and the chromatic corrections, wherein the adjusted device-independent color coordinates correct for the accuracies in the CIE standard.

The techniques described in Katoh do not correct for accuracies in the CIE standards. Again, in Katoh, the correction techniques are specifically used to account for different intensity levels of illumination, color temperature, and impacts of the surroundings. Thus, according to the teaching of Katoh, no adjustments would be performed in the event that the device-independent coordinates and illuminant conditions are identical for the display and the hard copy. Consequently, Katoh does not correct for any accuracies defined by the CIE standards.

CONCLUSION

In view of the amendments to the claims and the foregoing comments, all claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 05-0225. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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1/13/06

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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656